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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,466	11/21/2003	Pierre Ramillon	245508US41X DIV	8125
22850	7590	02/04/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			DESTA, ELIAS	
			ART UNIT	PAPER NUMBER
			2857	

DATE MAILED: 02/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/717,466

Applicant(s)

RAMILLON ET AL.

Examiner

Elias Desta

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 10/368,535.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/23/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Detailed Action

Drawing

1. The drawing is objected to because of the following minor informalities:
 - Fig. 4: label the “context” box as ‘12’ and the “useful signature” box as ‘28’;
and
 - Fig. 9: the label on “useful signature” should be ‘28’ rather than ‘16’.

Specification

2. The specification is objected to because of the following minor informalities:
 - Applicant is required to review the specification for factual and technical error.

For instance:

- Page 1, paragraph 3, line 1: delete “no such methods exist as yet” since applicant does not know the outcome of the prosecution as yet;
- Page 2, paragraph 4: line 1, delete the word “the documents”, line 3; replace the word “documents” with prior art, and in the last sentence delete the phrase “Here it is not a question of” and the following sentence better reads ‘Identifying the source of an unknown noise includes determining if a noise emitted by a known source has anomalies or not’; and

- Page 4, paragraph 14: needs to be revised for better comprehension.

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim rejection – Obvious Type

3. Claims 1-14 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-19 of copending Application No. 10/368,535. Although the conflicting claims are not identical, they are not patentably distinct from each other because it would have been obvious to one having ordinary skill in the art that the system or the means for identifying a signal source in a predetermined space (as noted in the instant application, see claims 1 and 7) and the method of identifying a source of a signal as noted in claim 1 of Application No. 10/368,535 are functionally the same in every respect.

The plurality of sensing units arranged at different locations of a predetermined space to detect signals in a predetermined space where the sensors are arranged to separately and simultaneously record a detected signal at each of the sensing units is actually done in parallel by recoding the signal of interest and storing

the parameters associated with the signal of interest as noted in claim 1 of application No 10/368,535. Hence, the term “separately and simultaneously” recording (as noted in claims 1 and 7 of the instant application is equivalent to the “parallel” recording scheme of claim 1 of Application No 10/368,535. The instant application (claim 1) includes a first storage area is configured to store a set of identified signatures corresponding to a plurality of signal sources in a predetermined space, and a second storage area configured to store parameters related to the conditions under which the recording of the signal is made.

Further in application No 10/368,535 claim 1 records the signals obtained from the system in parallel and also stores the parameter significant of the conditions under which the recording is made (i.e., parameters related to the conditions). Under these circumstances, an ordinary skill in the art would have found that these parallel data should occupy first and second logical storage spaces, because claim 1 of application No 10/368,535 subsequently analyzes each data to determine the spectrum of each signal.

After analyzing the detected signal and determining the spectrum (see application No 10/368,535, claim 1 and claims 1 and 7 of the instant application), the system detects a line emerging from background noise of the spectrum by using a predetermined emergence threshold and compares each of the line detected with some or all of a set of signatures of sources identified in a database. Further, for each

line detected (where applicable) the system provides a scheme for selecting signatures corresponding to the line detected or corresponds to the function of the resulting signature/line pair.

The sensing unit (as noted in claim 2 of the instant application) in the system is arranged an accelerometer and a microphone (which is also equivalently described in claims 18 and 19 of Application No. 10/368,535). The predetermined space (such as the airplane cabin) includes at least one of an interior space and components of a transportation vehicle, which is equivalent to say that the method applies for detecting signals inside a transportation means (as noted in claim 10 of Application No. 10/368,535). Claim 4 of the instant application is equivalent to claim 16 of Application No. 10/368,535). Given the arrangement of the detection and the nature of the processing of the signal, both the instant application (as noted in claim 5) and Application No. 10/368,535 (claim 11) are used inside a transportation means, such as an aircraft cabin (as noted in the instant application). The signal is used for detecting certain signals during the operation of the vehicle, such as an airplane; hence, the proximity of the sensing device would be more logical to have it in the cabin where a close monitoring and action is subsequently required (claim 5 is equivalent to claim 11). Given the claim limitations noted above, and the limitation noted in claim 12 of Application No. 10/368,535, where the stored parameter of the conditions under which the recording is made are flight parameters, such as speed of the aircraft, its

altitude, flight phase (climb, cruising or decent) and engine revolution often benefit from a permanent attachment instrument rather than a portable system because most of these sensors require a tight fitting and complex circuit /sensor arrangement where the sensors are maintained at a fixed position or application for a long time. The method or the means for resolving signature/line pairs ambiguity when the selecting step results in two or more signature where a step is taken following steps as noted in claim 8 of the instant application is equivalently described in the middle portion of claim 1 of Application No. 10/368,535. Similarly, resolving a signature/line pair ambiguity as noted in claim 9 of the instant application is also equivalently described in the three forth portion of claim 1 of Application No. 10/368,535. The comparator for quantifying a source when selecting a step results in no signature/line pair as noted in claim 10 of the instant application is equivalent to the last portion of claim 1 of Application No. 10/368,535.

Further, claims 11-14 of the instant application are equivalent to claims 5-8 of Application No. 10/368,535 respectively.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

4. Citation of pertinent prior art:

- a. DiMaggio et al. (U.S. PAP 2003/0028332) teaches a rocket engine gear defect monitoring method
- b. Bartle et al. (U.S. Patent 4,603,584) teaches acoustic detection of defects in structures.
- c. Geib et al. (U.S. Patent 5,804,726) teaches acoustic signature analysis for a noisy environment.
- d. Oravec (U.S. PAP 2003/0023393) teaches acoustic micro imaging method and apparatus for capturing 4D acoustic reflection virtual samples.
- e. Morais (U.S. Patent 4,036,057) teaches automatic threshold control means for acoustic emission and other informational discriminating systems.
- f. Marko et al. (U.S. PAP 2003/0216889) teaches remote diagnostics and prognostic methods for complex systems.
- g. Wegerich et al. (U.S. PAP 2002/0183971) teaches a system method and program product for sub-band domain signal validation.
- h. Wegerich (U.S. PAP 2001/0049590) teaches a system, method and program product for monitoring a complex signal for ultra sensitive detection of state changes.
- i. Ottosson (U.S. PAP 2001/0005821) teaches method and system for monitoring the condition of an individual machine.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elias Desta whose telephone number is (571)-272-2214. The examiner can normally be reached on M-Thu (8:30-7:00).

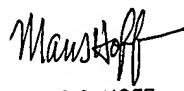
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (571)-272-2216. The fax phone numbers for the organization where this application or proceeding is assigned are (703)-872-9306 for regular communications and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)-272-1750.

Elias Desta
Examiner
Art Unit 2857

-ed

February 1, 2005


MARC S. HOFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800